

REMARKS

This amendment responds to the office action mailed June 18, 2003. In the office action the Examiner:

- rejected claims 1-4 and 6 as being anticipated by Moyle et al. (U.S. Patent No. 3,706,840); and
- rejected claims 5 and 7-9 as being unpatentable over Moyle et al.

Claims 10-17 have been withdrawn by Applicant. After entry of this amendment, the pending claims are: claims 1-9.

Claim Rejections - 35 U.S.C. 102

Applicant's invention is directed to an integrated circuit package that comprises a lead finger mounting ring serving the dual purposes of extending upwards from a substrate to form a container together with the substrate (Figs. 1A and 2A) and mounting a package lead on its top surface (Figs. 1B and 2B). The container confines a liquid epoxy material during a curing process to form an encapsulation over the bond wire, the semiconductor die, and a portion of the package lead ((Fig. 1D).

In rejecting the claims to Applicant's invention as anticipated by Moyle et al., it seems that the Examiner reads the elevated circular portion of substrate 31 between mounting pad 17 and electrical leads 21 in Figs. 4A-4E of Moyle et al. on the lead finger mounting ring of Applicant's claims. However, the elevated circular portion of substrate 31 cannot be equated to the lead finger mounting ring recited in claims 1 and 6. First, the elevated circular portion of substrate 31 is not a ring but rather the upper edge of a bowl-like depression in the substrate. Second, the electrical leads 21 are not attached to the upper surface of the elevated circular portion of substrate 31, but to the outer sidewall of the elevated circular portion of substrate 31 below the upper surface of the elevated portion. Third, the elevated circular portion of substrate 31 is not positioned on the peripheral region of the substrate because the peripheral region of the substrate is occupied by the electrical leads 21. Fourth, the elevated circular portion does not form a container that effectively confines the liquid resin 46. As shown in Fig. 4D, a significant portion of the liquid resin 46 is on top of or even outside the elevated circular portion of substrate 31. As a result, the capacity of the circular portion of substrate 31 for confining the liquid resin is very limited compared with the peripherally-mounted lead finger mounting ring recited in claims 1 and 6.

If the Examiner's intention is not to read the lead finger mounting ring on the elevated circular portion of substrate 31, the only other possible candidate is the outer flat portion of substrate 31, since the electrical leads 21 are attached to the upper surface of this portion. This outer flat portion, however, cannot be equated to the lead finger mounting ring recited in claims 1 and 6 because neither Figs. 4A-4E nor the specification of Moyle et al. teaches or suggests that the outer flat portion forms a container to confine the liquid resin 46. As shown in Fig. 4D, the whole body of the liquid resin 46 is actually above or at least on the upper surface of the outer flat portion of surface 31.

Since Moyle et al. does not disclose a lead finger mounting ring positioned on the peripheral region of a substrate and extending upwards from the substrate and a package lead attached to the upper surface of the lead finger mounting ring, claim 1 as well as its dependent claims 2-4 and claim 6, are not anticipated by Moyle et al.

Claim Rejections - 35 U.S.C. 103

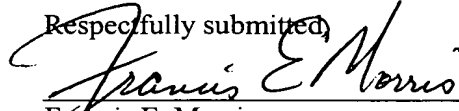
To reject the claims in an application under 35 U.S.C. 103, the Examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Bell*, 26 USPQ2d 1529, 1530 (Fed. Cir. 1993). In order to establish prima facie obviousness the prior art, either alone or in combination, must teach or suggest each and every limitation of the rejected claims. See *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991); *In re Royka and Martin* 180 USPQ 580 (C.C.P.A. 1974); and *In re Wilson* 165 USPQ 494 (C.C.P.A. 1970).

As discussed above, Moyle et al. fails to teach the limitations that a lead finger mounting ring is positioned on the peripheral region of a substrate and extends upwards from the substrate and that a package lead is attached to the upper surface of the lead finger mounting ring. Therefore, claims 5 and 7-9, ultimately dependent from claims 1 and 6, respectively, are patentable over Moyle et al.

In light of the above amendments and remarks, the Applicant respectfully requests that the Examiner reconsider this application with a view towards allowance. The Examiner is invited to call the undersigned attorney at (650) 493-4935, if a telephone call could help resolve any remaining items.

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Respectfully submitted,



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